

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of the claims

Claims:

1. (currently amended) A router cutter for cutting panel-receiving grooves in assembled square or rectangular frame or box members, comprising
a router cutter shaft for mounting in an electric router,
a cutter mounted on the shaft, the cutter having a shape for cutting a groove with a flat bottom and two groove sides at right angles to the groove bottom, and having a cutting radius
and a cutter width ~~mounted on the shaft~~, and
a guide bearing having a radius mounted on the shaft adjacent to the ~~wing~~ cutter,
wherein the difference between the cutting radius and the bearing radius is greater than the bearing radius multiplied by the square root of 2 so that a groove cut using the router cutter on the inside of the assembled square or rectangular frame or box will be continuous and the entire peripheral edge of a panel having a peripheral edge can be received within the frame or box.
2. (original) The cutter of claim 1, wherein the guide bearing is approximately 5/16 inch in diameter.

3. (original) The cutter of claim 1, wherein the guide bearing is approximately $7/16$ inch in diameter.
4. (previously presented) The cutter of claim 2, wherein the cutting radius of the cutter is approximately $11/32$ ".
5. (previously presented) The cutter of claim 3, wherein the cutting radius of the cutter is approximately $11/32$ ".
6. (previously presented) The cutter of claim 1, wherein the cutting diameter of the cutter is approximately 0.669 ".
7. (original) The cutter of claim 4, wherein the cutter width is approximately $1/4$ ".
8. (original) The cutter of claim 5, wherein the cutter width is approximately $1/8$ ".
9. (original) The cutter of claim 1 wherein the cutter diameter is approximately 17mm and the bearing diameter is approximately 10mm.

10. (currently amended) A method of cutting a groove to receive a panel in a rectangular or square frame having a plurality of members, comprising:

preparing the frame members by forming joint elements on the end of the frame members,

temporarily assembling the frame members into the frame having an inside face,

manipulating one of the temporarily assembled frame or a router to cut inside the frame a continuous groove ~~inside the frame~~ comprising a flat groove bottom and two groove sides at right angles to the groove bottom, using a router cutter while contacting the inside face of the frame with an arcuate bearing surface having an arcuate radius R with the arc centered on the cutter axis of rotation, wherein the cutting diameter of the router cutter is larger than the product of the radius R multiplied by the square root of 2 so that a groove cut using the router cutter on the inside of the assembled square or rectangular frame or box will be continuous.

11. (cancelled)

12. (currently amended) A method of producing a frame and panel structure, comprising:

forming a rectangular panel having a tongue thickness T ,

preparing frame members of appropriate length, and having end structures appropriate to join the frame members into a frame around the panel,

temporarily assembling the frame members into the frame having an inside face,

manipulating one of the temporarily assembled frame or a router to cut inside the frame a continuous groove ~~inside the frame~~ comprising a flat groove bottom and two groove sides at right angles to the groove bottom, using a router cutter while contacting the inside face of the frame with a bearing having a radius R , wherein the cutting diameter of the router cutter is larger than the product of the radius R multiplied by the square root of 2 so that a groove cut using the router cutter on the inside of the assembled frame will be continuous,

forming radii on the panel corners equal to or slightly larger than than the product of the radius R multiplied by the square root of 2 but small enough to insure that there will be panel tongue inside the groove at the frame corners, and

positioning the panel within the frame and permanently assembling the frame.